EXHIBIT G

UNITED STATES DISTRICT COURT

NORTHERN DISTRICT OF CALIFORNIA

SAN FRANCISCO DIVISION

IN RE PACIFIC FERTILITY CENTER LITIGATION,) Case No. 3:18-cv-01586-JSC

VIDEOTAPED & VIDEOCONFERENCED DEPOSITION of J. DAVID WININGER, Ph.D., taken on behalf of Defendant remotely beginning at 8:03 a.m., Monday, November 30, 2020, before CHERREE P. PETERSON, RPR, CRR, Certified Shorthand Reporter No. 11108.

A P P E A R A N C E S

FOR THE PLAINTIFFS:

GIBBS LAW GROUP LLP
505 14th Street, Suite 1110
Oakland, California 94162
BY: AMY M. ZEMAN, ESQ.
(510) 350-9700
amz@classlawgroup.com

FOR THE DEFENDANT CHART INDUSTRIES, INC.:

SWANSON, MARTIN & BELL, LLP
330 N Wabash, Suite 3300
Chicago, Illinois 60611
BY: JOHN J. DUFFY, ESQ.
KEVIN M. RINGEL, ESQ.
MARGARET C. REDSHAW, ESQ.
(312) 321-9100
jduffy@smbtrials.com
kringel@smbtrials.com
mredshaw@smbtrials.com

THE VIDEOGRAPHER:

PHILIP KNOWLES

I N D E X

---oOo---

E X H I B I T S

---oOo---

NOVEMBER 30, 2020

---oOo---

BE IT REMEMBERED that set on Monday, the 30th day of November, 2020, commencing at the hour of 8:03 a.m., taken remotely before me, Cherree P. Peterson, RPR, CRR, CSR No. 11108, a Certified Shorthand Reporter, personally appeared

J. DAVID WININGER, Ph.D.,

having been called as a witness by the defendant, who having been duly sworn by me to tell the truth, the whole truth, and nothing but the truth, was thereupon examined and testified as hereinafter set forth.

---oOo---

THE VIDEOGRAPHER: Good morning, Counsel. My name is Philip Knowles. And I am the host and videographer associated with Barkley Court Reporters located at 201 California Street, Suite 375, in San Francisco, California 94111. The date today is Monday, November 30th, 2020, and the time is approximately 8:03 a.m. Pacific Standard Time.

This deposition is taking place remotely via Zoom in the matter of Pacific Fertility Center litigation with case number 3:18-CV-01586-JSC. This is the videotaped deposition of Ph.D. David Wininger being taken on behalf of counsel for defendants.

Page 6

Will counsels for the parties please voice identify themselves.
MR. DUFFY: John Duffy for Chart.
MS. ZEMAN: Amy Zeman for the plaintiffs.
THE VIDEOGRAPHER: Thank you. The court reporter may now swear in the witness, and we can proceed.
THE REPORTER: Raise your right hand, please, Doctor.
(Whereupon the witness was placed under oath.)
THE REPORTER: Thank you.
EXAMINATION BY MR. DUFFY
Q. Good morning, Dr. Wininger. My name is John Duffy; and I represent Chart, Inc., the maker of the MVE freezer at issue in this case. I'm going to be taking your deposition this morning. I know you have and are represented by able counsel, but I figured we'd just go over a couple of ground rules to hopefully make this a little bit easier for you and me, for Ms. Zeman and for the court reporter.
So as you can see, we are taking your deposition remotely. And that's obviously being done on Zoom. Normally these things are done while we're all in the same room. And some of the body language that we could get for being in the same room would be easier

Page 7

seen, but here we're going to be doing it remotely.
One of the things that's really, really important for Cherree, our court reporter, is that we both wait for the other person to finish speaking before we begin speaking. And the reason we have to do that is Cherree can't take two people talking down on her machine at the same time. Okay?
A. Okay.
Q. One of the things I think you'll probably see as I'm asking my questions is you'll know the answer even before I'm finished, but that's where we have to hope for you to just wait and then let me finish and then you can give your answer. Okay?
A. Okay.
Q. I also need you to make sure all of your answers are audible, out loud. You can't shake your head or shrug your shoulders in response to a question. Okay?
A. Okay.
Q. And that's because Cherree can't take that down on a transcript. Okay?
A. Okay.
Q. I don't always ask the best questions. If I ask you a question that doesn't make sense, please go ahead and ask me to rephrase it. Okay?

Page 8

A. Okay.
Q. If you answer my questions, I'm going to assume that you have understood what I've asked you. Is that fair?
A. That's fair.
Q. Okay. How old are you, sir?
A. I am 57.
Q. And where did you grow up?
A. I grew up in upper east Tennessee, in Blountville, Tennessee. It's close to Kingsport, Bristol, up in the -- kind of close to Virginia.
Q. And where did you go to college?
A. Undergraduate I went to East Tennessee State University in Johnson City, Tennessee. I got my BS there. And then I went to University of Tennessee, Knoxville, for my master's degree in biotechnology and my Ph.D. in zoology.
Q. And when did you receive your undergraduate degree?
A. I received that in '84.
Q. And when did you receive your master's?
A. '86.
Q. And how about your Ph.D.?
A. 1990.
Q. What was the thesis that you wrote for your

Page 9

Ph.D.?
A. My Ph.D. was on the -- it was the maturation of immature oocytes and the identification of bonding sites for prolactin via scanning electron microscopy because my master's -- my master's work was showing that prolactin increased maturation of oocytes. So I showed that through scanning microscopy I could localize the receptor sites for prolactin on the oocytes for several different species.
Q. Have you ever given a deposition before?
A. No, I haven't.
Q. I was able to review your curriculum vitae before the beginning of our deposition. I just had a couple of questions for you about where you're working now. Well, even before I get there, because this is going to be sort of relevant to some of my questions, do you currently live in Advance, North Carolina?
A. Yes, I do.
Q. And in your CV I noticed that you list five labs that you're currently the lab director for; is that right?
A. That is correct.
Q. The first one is Westlake IVF in Austin, Texas; is that right?
A. That is one of them, correct.

Page 10

Q. And are you an on-site or off-site director for them?
A. I am the off-site director for that lab.
Q. And then another lab that you are a director for is Atlantic Reproductive Medicine in Raleigh, North Carolina; is that right?
A. That's correct.
Q. Are you on-site or an off-site director for the Atlantic Reproductive Medicine lab?
A. I am on site.
Q. And then you are also the lab director at Magee Women's Hospital in Pittsburgh, Pennsylvania; correct?
A. Correct.
Q. Are you an on-site or off-site director for Magee Women's Hospital?
A. I'm the off-site director.
Q. And you're also the laboratory director of the University of Pittsburgh Physicians in Hermitage, Pennsylvania; is that right?
A. Yes.
Q. And are you on site or off site there?
A. I am off site.
Q. And then, finally, you are the lab director at Carolina Specialty Care; is that correct?
A. That's correct.

Page 11

Q. And is that an on-site or off-site lab directorship?
A. That is off site.
Q. So currently you have one on-site director position and four off-site director positions; correct?
A. That is correct.
Q. Is the Magee Women's Hospital lab accredited by the College of American Pathologists?
A. Yes, it is.
Q. Is the University of Pittsburgh Physicians laboratory accredited by the College of American Pathologists?
A. Yes, it is.
Q. How about Carolina Specialty Care, is that also accredited by CAP?
A. Yes.
Q. And the Atlantic Reproductive Medicine lab, is that CAP accredited?
A. Yes, it is.
Q. And Westlake as well?
A. Yes.
Q. In your curriculum vitae you list an assistant professorship at Wake Forest, and it lasted from October of 2017 to January of 2018 or about three months. Is that a position that you held?

Page 12

A. Yes, I did hold that.
Q. Why did you only serve in that role for three months?
A. I actually held that position previously for four years earlier in the 2000s when I first moved to North Carolina. The reason I held it for only three months during this second time I worked there was that it was a transition period where a lab was closed where I was directing in High Point, North Carolina, for ten years. The University of North Carolina bought the hospital and closed our program.
So the medical director, the program director of OB-GYN at Wake Forest gave me a position for a short amount of time until I found something else that I was interested in. So I did -- I was there for a short amount of time until I started on site at Atlantic Reproductive Medicine and started more off-site lab directorships.
Q. I notice in your curriculum vitae that you were the lab director at Toll Center for Reproductive Sciences at Abington Memorial Hospital in Abington, Pennsylvania, from about 1993 to 1998. Does that sound about right?
A. That's correct.
Q. Did you work with Dr. Somkuti at Abington?

Page 13

A. Yes, I worked with Dr. Somkuti for several years. He was not there when I took the position, but he joined a practice for the last few years that I was at Abington.
Q. And are you and Dr. Somkuti friends?
A. No, we are not.
Q. Are you familiar with the concept of long-term storage of human tissue by outside companies?
A. Yes, I am.
Q. In the labs that you currently direct, are you doing long-term storage in your labs or are you sending the tissue off site to a long-term storage company for future use?
A. Really, all the labs where I work that we do in vitro fertilization we do a combination of the two with the majority on site.
Q. What's the distinction between short-term and long-term in your lab?
A. Yeah, I'll speak first of our lab in Raleigh, Atlantic Reproductive, since that's where I'm on site. Most of our patients do store on site, but the patients that we do procedures for embryo cryopreservation, oocyte -- or, actually, vitrification embryo, vitrification oocyte, vitrification or sperm cryopreservation for cancer treatment or if they're

Page 14

going to military. We have a lot of military officers or members that come in that cryopreserve sperm before they go off seas, overseas, and we cryopreserve sperm for them. And those go into long-term storage that we send to a company off site. So any samples that we think are going to be long-term storage that they do not intend to use for years, we do store those off site.

Q. At Atlantic Reproductive do you have an egg freezing program?

A. Yes, we do.

Q. And do you store those at Atlantic Reproductive in Raleigh, North Carolina, or do you send those out for long-term storage?

A. It depends on what the patient's wishes are. If they plan on using those eggs within a year, we keep them on site. If it's going to be a long term, again, a cancer patient or something like that that's going to be a very long term or they're going to have chemotherapy and other types of procedures, we store those off site. And then also --

Q. And -- sorry. My bad. Sorry. Go ahead.

A. That's all right. And we also cryopreserve for some egg banks. And those -- we store those on site until they are -- they are needed somewhere else, and then we send those to the different IVF facilities.

Page 15

Q. So at Atlantic Reproductive you actually have a section of your lab dedicated to storing eggs for another facility?

A. Not another facility. It's another -- it's a -- it's an egg bank that we vitrify oocytes for them. There are something like 50 different IVF programs in the US that take part in this. And then when the patient gets -- has a cat -- they have a catalog of the eggs. And if they pick some eggs that are at our facility, we are contacted by the egg bank. And they send a dry shipper, which is a small liquid nitrogen vessel that you actually add nitrogen to it and it absorbs into sort of a sponge-type area. And we put the cane of oocytes into that, and they are picked up by a courier and shipped to the IVF center that requested -- that the patient requested these oocytes. So that's -- we do not do a lot of that. The vast majority egg cryopreservation we do is our -- is for our patients.

Q. And do you send any of those eggs off site if the patient, for example, doesn't know when they may use them in the future?

A. If they -- again, if they do not intend on using them within a year, we can send them off site because it's either long-term banking and there's a place in our -- a registry, our SART registry where we

Page 16

have to put these eggs or embryos are going to be long-term storage. And we put that in there so that means we're not going -- we're not going to do anything with them for a year. It's the same with embryos.

Q. And what facility do you send eggs and embryos to for long-term storage?

A. ReproTech.

Q. And which location do you send those to?

A. We send those to a location in Florida.

Q. Do the patients at your labs then enter into a storage agreement with ReproTech?

A. Some of -- patients that are going to actually use ReproTech, they do sign a long term -- they do have to sign a storage document with ReproTech. And a lot of the -- we have a lot of the men that are going to be doing sperm cryopreservation. We have them sign the document. Really, all of them do. Because unless they're freezing and ready -- you know, if their wife is actively having in vitro fertilization and they want to freeze a few samples before the egg retrieval in case they have an issue the day of. Other men do freeze for long-term storage, and we do definitely have them sign a ReproTech agreement.

Q. And then the storage fees for long-term storage of eggs or sperm, the payments would go to ReproTech,

Page 17

not to your lab. Is that fair?

A. That's correct.

MS. ZEMAN: Objection. John, what is the relevance of this to his report?

MR. DUFFY: It's just background.

MS. ZEMAN: It does not seem particularly relevant to his opinions as stated in his report.

But, David, you can go ahead and answer his last question.

MR. DUFFY: He did, actually.

Q. In your review of the materials, Dr. Wininger, did you see whether PFC employed a -- well, strike that.

In your review of the materials, did PFC do long-term storage of eggs and embryos?

A. Not that I noticed. What I saw was on-site storage.

Q. And I guess that's my fault. That was a bad question. Would PFC store eggs and embryos for more than one year?

A. Yes, they would.

Q. And did you see any evidence that they offered long-term storage at another facility?

A. No, I didn't.

Q. What is the American Association of Tissue Banks?

Page 18

A. That is an organization that is involved with -- as it says, just any issues involving any type of tissue banking.
Q. And do they provide certification process?
A. Not that I know of. I do not -- I do not know a lot about AATB. But they do have recommendations and information. But I do not know of centers that are -- receive accreditation by AATB.
Q. What is the American Board of Bioanalysis?
A. American Board of Bioanalysis is sort of our -- one of our agencies that we go through to receive our accreditation individually. So the -- when I received my Ph.D. and -- I had to get an HCLD, high complexity laboratory director, to get that. I had to apply through -- the application was actually through AAB, American Association -- American Association of Bioanalysis. But the actual certificate comes from the Board, American Board of Bioanalysis. So they -- all of my -- when I -- I have to get so many hours of continuing education credit every two years as part of that HCLD, and that is -- that goes through the Board.
Q. So are you familiar with the board certification process for a physician?
A. No, I am not.
Q. Would an AAB HCLD certification be like a board

Page 19

certification for a lab director?
A. Yes, it is.
Q. And you have a -- you're board certified as a high complexity lab director; is that right?
A. That is correct.
Q. And Grace Centola is also board certified as a high complexity lab director?
A. Yes, she is.
Q. And is Joseph Conaghan also board certified as a high complexity lab director?
A. Yes, he is.
Q. In order to be a lab director, you need to have an HCLD typically. Is that a fair statement?
A. That is correct.
Q. In order to get an HCLD, you have to meet minimum standards for assisted reproductive technologies; is that right?
A. Yes. But before you can take the HCLD, you have -- you have to perform a number of procedures by yourself before you can sit for the HCLD. You have to supervise staff. You have -- you have to do I think -- when I took it in '93, I think, '93 -- '90 -- I think it was '93 we had to show that we had, again, supervised staff, that we had performed 20 in vitro fertilization procedures alone, things like that, to sit for the HCLD.

Page 20

And then -- that's correct.
Q. And do you also need an educational background of a particular type?
A. Yes.
Q. And what is that?
A. A degree in a biological, chemical, or a physical science.
Q. And when you're gaining the minimum standards for assisted reproductive technology procedures, you're performing procedures pursuant to the guidelines set forth by the American Society of Reproductive Medicine; correct?
A. Yes.
Q. Is it true that federal regulations recognize AAB as the certifying agency for directors and clinical consultants?
A. Yes, they do.
Q. And most states recognize AAB as the certifying agency for lab directors. Is that a fair statement?
A. Yes.
Q. I notice that you also have another designation from AAB which is clinical consultant; is that right?
A. Yes.
Q. What is a clinical consultant?
A. That -- the clinical consultant is another

Page 21

requirement. You have to have a clinical consultant at your -- at your laboratory, at your -- at your clinic. So a lot of -- a lot of times M.D.s will fill that role. But I -- AAB will certify you as a clinical consultant.
So the lab can be -- the HCLD can also be a clinical consultant where we can look -- really just means evaluating all of the data and being able to give that information to the physicians or if -- actually, if the patient happens to be in the office with the -- with the physician, he can call me in to give really more information with the patient with the M.D. present about embryology question, andrology question, really anything that has to do with the lab.
Q. And so when you're a clinical consultant, does that allow you to interpret lab results?
A. Well, really you do not need a clinical consultant to interpret lab results. I have -- I have just recently -- I haven't had a clinical consultant for that long. So I have been doing this for over 30 years. So I've been interpreting the laboratory results for andrology and embryology and really all the laboratories that, you know -- everything that happens in the lab. And the clinical consultant is just sort of something you can add on to your HCLD without taking an additional test.

Page 22

Q. Do you -- do you recall specifically what it allows you to do -- excuse me -- what it allows you to do that adds to whatever you are able to do as an HCLD?

MS. ZEMAN: Objection. Asked and answered.

Q. BY MR. DUFFY: You can answer.

A. Really, it, again, I have -- I can meet with the patients in the presence of the M.D. And, actually, some of the men I can meet with. I have met some of the men that -- in the -- from the andrology lab that have questions about their results. Or they will call, and I can give them information about their results. And it really doesn't -- to tell you the truth, doesn't add a whole lot to what I was doing before.

But, I mean, there are people that have other degrees as well on top of their HCLD that doesn't give them any -- anything else. I mean, there's HCLD means that we can direct andrology and embryology laboratories. But there are some people that have HCLD and an ELD, which means an embryology laboratory director, which an HCLD does the same thing.

Q. The ELD designation that you have just mentioned, that is another board certification issued by AAB; is that right?

A. That is correct.

Q. And an embryology lab director still has not

Page 23

been recognized by the federal regulations governing IVF. Is that a true statement?

A. Yeah, that is correct.

Q. Would you describe for us briefly what CLIA means in your practice?

A. What CLIA means is basically the state certification that tells us that we can operate our business. We do not have a CLIA inspection. It is if -- if you have a CAP certification, CLIA says that you can -- you do not have to have a separate CLIA registration or inspection as well. They say that the CAP regulations are more stringent than CLIA.

So CLIA really is the -- sort of the license that gives us permission to operate our assisted reproductive business there at the different locations. And but as long as we are CAP accredited, we do not have to actually do anything. But they will send the new CLIA certificate every two years.

Q. So do state regulators -- well, strike that. Let me make sure I understand.

In the five labs where you're a lab director today, all five of those are CAP certified; correct?

A. Yes.

Q. And they're in three states, Texas, North Carolina, and Pennsylvania; is that right?

Page 24

A. Yes.

Q. And because your labs are CAP accredited, representatives of the states of Texas, North Carolina, and Pennsylvania do not come in to inspect your labs; correct?

A. That's correct.

Q. They depend upon CAP to do that; correct?

A. That is correct.

Q. How about the FDA, does the FDA come in and inspect your labs?

A. Yes, they do.

Q. How often do they do that?

A. They do that every two years also like CAP. They're on a two-year plan.

Q. When the FDA sends an inspector in to conduct an investigation or an inspection, is that individual an HCLD?

A. No.

Q. I wanted to ask you just a little bit about your work here in -- forensic-type work here in litigation. Have you ever done it before this assignment?

A. I don't understand the question.

Q. Oh, okay. It was a bad one, Dr. Wininger. I'm sorry.

Page 25

A. It's actually Wininger.

Q. Wininger. Okay. Thank you very much.

A. Okay.

Q. Dr. Wininger, have you ever acted as an expert before?

A. No, I haven't.

Q. When were you hired?

A. It was --

MS. ZEMAN: Objection. I don't see the relevance.

Q. BY MR. DUFFY: You can -- you can answer.

A. It's a few months ago. I don't remember the exact date.

Q. So it's November 30, 2020, today. And you were hired just a few months ago. Does that sound about right?

A. Yes.

Q. Who contacted you first?

A. Mr. Polk.

Q. How -- strike that.

Do you know how they got your name?

A. They got my name from Dr. Somkuti.

Q. Let me share with you in the chat feature, Dr. Wininger, the report that you have done in this case.

And then, Philip, could you mark this as Chart

Page 26

Exhibit 222.
THE VIDEOGRAPHER: Absolutely.
(Defendant's Exhibit 222 marked for identification.)
Q. BY MR. DUFFY: Dr. Wininger, when you download it on your end, go ahead and open it up, if you would, just so you have it available. And just let me know when you're able to do that.
THE VIDEOGRAPHER: Do you want me to share my screen and bring it forward or?
MR. DUFFY: No. No. That's okay. I think it's a little easier when witnesses are able to control the document. Thank you, though, Philip.
THE VIDEOGRAPHER: No worries. I'll shut up now.
THE WITNESS: Okay. I have it open.
Q. BY MR. DUFFY: Okay. You were retained to provide a professional opinion in three areas. Does that sound right?
A. Yes.
Q. One was whether Tank 4 performed as safely as an ordinary user of cryogenic vessels would expect; correct?
A. That's correct.
Q. And the second was whether the plaintiffs' eggs

Page 27

and embryos were damaged by the Tank 4 incident; is that right?
A. Yes.
Q. And third is whether plaintiffs' eggs and embryos were exposed to dangerous conditions prior to the Tank 4 incident; is that right?
A. Yes. That is correct.
Q. Do you have any opinions about whether Joseph Conaghan and his lab colleagues complied with the standard of care in this case?
A. No, I do not.
Q. As part of your opinions you read Dr. Conaghan's 2019 and 2020 depositions; correct?
A. That's correct.
Q. And did you review the exhibits to those depositions as well?
A. Yes, I did.
Q. Did you read the deposition of Gina Cirimele and the exhibits to that deposition?
A. I do not -- I do not recall reading that deposition.
Q. All right. Turn to page 28 of your report, please, and just let me know when you're there.
A. Okay. I'm here.
Q. At the bottom of the page on 28 and you'll see

Page 28

a designation of 8-31-20. Do you see that?
A. 8-21 or 8-31?
Q. 8-31, Doctor.
A. Okay. Yes. Yes. I see that.
Q. And it's listed here as a deposition of Gina Cirimele; is that right?
A. Yes, it is.
Q. Is that a deposition -- does this reflect -- refresh your recollection that you reviewed that deposition?
A. Yes, you're correct. I reviewed so many things. Yes, you're correct.
Q. Do you know Joseph Conaghan?
A. No, I do not.
Q. You've never met him?
A. No, I have not.
Q. Do you know Grace Centola?
A. Yes, I do.
Q. How do you know Ms. -- or Dr. Centola?
A. She -- I knew her from a lab in Pennsylvania that I was associated with back in the mid '90s. And she was also the editor of a -- of the online editor of an online embryology discussion board that most embryologists are -- belong to called Embryomail. I knew -- I knew of her from that. And I have run into

Page 29

her at a couple of industry events.
Q. And what lab in Pennsylvania did you work at that she was associated with?
A. I did not work with her while she was at that lab. But it was a lab that I was involved with after she left. It was Bryn Mawr Hospital in Bryn Mawr, Pennsylvania.
Q. And approximately when did you take over the Bryn Mawr lab?
A. Well, I was asked to design that lab while I was working at Abington Memorial Hospital. There was an M.D. there that was from the Bryn Mawr area that actually had to drive to Abington daily. It's about a 30- to 45-minute drive. And he did that for several years and decided he wanted to set up a new IVF program at Bryn Mawr Hospital, and he asked me to help him design the lab.
So I -- so I did design the lab and met with the architects and everything you have to do as -- when you're designing an IVF lab. But before he actually opened, I received a job offer from another lab in Georgia, Atlanta. So I moved but stayed on as his off-site lab director for many years until I got too busy at my laboratory in Atlanta, which was a very, very large lab.

Page 30

So at that point they brought in Dr. Centola. And I'm not exactly sure how long she was there. But she ended up leaving the position, and I was asked to come back as an off-site lab director for several more years until they actually hired them a full-time lab director.

Q. How long did you serve in that off-site directorship for Bryn Mawr after Dr. Centola left?

A. I think it was approximately three or four years.

Q. Just so I understand it, Dr. Wininger, did Dr. Centola take over the Bryn Mawr lab after you had designed it; is that right?

A. No. That's incorrect.

Q. I'm sorry. What -- did she serve at Bryn Mawr before your time there and after your time there, or did she only serve at Bryn Mawr after your time there?

A. Well, after I designed the lab and moved to Atlanta, I was asked to be the off-site lab director. And I stayed -- I was their off-site lab director for approximately five or six years.

And at that time -- at which time, again, I got too busy in Atlanta at the large IVF center. So I had to tell the physicians I had to stop being their off-site lab director.

Page 31

Q. And is that when they hired Dr. Centola?

A. Yes.

Q. And how long did she serve as the off-site lab director at Bryn Mawr?

A. I'm not sure how long she was there.

Q. But would it be fair to say that she was the off-site lab director at Bryn Mawr in the lab that you helped design?

A. That's correct.

Q. And --

A. I'm not sure, again, as -- I'm still not sure for how long she was there.

Q. When you came back to be the off-site lab director at Bryn Mawr, did you have any criticisms of Dr. Centola as a lab director for her time at Bryn Mawr?

A. I personally did not.

Q. Did somebody else other than yourself?

A. Well, it was -- I was told that she was mainly involved in the andrology and endocrine part but did not really work in the embryology lab as much as they would have liked. That I think her expertise was on the andrology side, and I think she did a good job there.

But it didn't seem that the embryology in vitro fertilization lab was what she was expert in. So I think that's when I -- they asked me to come back because I had held -- that's what I mainly do. I'm an embryologist laboratory director. So that's -- and I also do andrology as well, but embryology is my -- is my main area of expertise.

Page 32

Q. Do you have an embryology lab director board certification?

A. Yes. The HCLD, I took the embryology part, the andrology part, and the general lab knowledge part. There were three different sections. So as I took -- when I took that, I was certified in both andrology, embryology, and general lab knowledge.

Q. Okay. So just so I understand it, then, when you get your HCLD board certification you simultaneously have a board certification for embryology lab director and andrology lab director; is that right?

A. At that time that is correct. Now you can take an HCLD and just pick and you can say I'm going to get an HCLD in just andrology or just embryology. So they can do the embryology part, they can direct embryology lab or an andrology lab, but not both. So I know a lot of, you know -- several people do that. That they're not comfortable taking it all at one -- at one sitting studying the whole part for all three parts.

Q. Okay. And you indicated that you were familiar with Dr. Centola for her work in an organization that I

Page 33

think you described as Embryomail; is that right?

A. That's correct.

Q. And can you tell us a little more about what that is or was?

A. Well, it's still very -- it's still present. It's a discussion group where you can post, ask questions to other embryologists, andrologists; you can put position notices on there if you're looking for an embryologist or an andrologist, a lab director, those sorts of things. So that's -- it seems like that is what mainly is happening with Embryomail now. It's more of a place to put in your request for new employees.

Q. Okay.

A. And it is still -- it is still very active. We probably get it three times a week.

Q. And what was Dr. Centola's role in Embryomail?

MS. ZEMAN: Objection. What is the relevance of this to Dr. Wininger's report?

MR. DUFFY: He has interactions with my expert. I want to find out about them.

MS. ZEMAN: Did he rely on those interactions for his report?

MR. DUFFY: I don't know. We can find out.

MS. ZEMAN: Well, why don't you ask him that, and then we can continue those questions. But as we've

Page 34

mentioned many times, there's a stipulation in this case governing discovery of experts. And I'm not seeing how this line of question has anything to do with what he relied on for his report or his report itself.

MR. DUFFY: I don't think in this deposition relevance is a valid objection, Amy.

MS. ZEMAN: Well, as I just said, it seems to be beyond the scope of the stipulation that governs what discovery can be pursued with our experts.

MR. DUFFY: In what way? I'm sorry. We can go off the record, if you'd like to discuss it. I'd be happy to do that.

MS. ZEMAN: Sure. We can go off the record for a moment.

THE VIDEOGRAPHER: We are now going off the record at 8:58 a.m. Pacific Standard Time.

(Whereupon a break was taken from 8:58 to 9:13.)

THE VIDEOGRAPHER: We are now going back on record. The time is 9:13 a.m. Pacific Standard Time.

MR. DUFFY: Cherree, would you please read back the last question and answer just so I can reorient myself.

THE REPORTER: There's actually a question pending.

Page 35

(Whereupon the record was read as requested.)

MR. DUFFY: You can go ahead and answer that question, please, Doctor.

THE WITNESS: I really don't know what the editor's role is there. I subscribe to Embryomail. And I read it, you know, every time it comes in my inbox. But you really don't -- you really don't see a lot of information from any of the people behind the scenes. So I'm really not sure what the role of editor is at Embryomail.

Q. BY MR. DUFFY: Okay. But that was Dr. Centola's role as an editor of Embryomail for a period of time?

A. Yes. I'm not sure how long, but I know she was there for a period of time.

Q. And you personally met Dr. Centola before; is that right?

A. Yes. We have met at industry events.

Q. Would that be the ASRM conferences?

A. Yes. Yes. The -- those conferences. There's a AAB conference that occurs annually as well. I mean, it used to. Now everything is virtual; so I haven't seen anybody in forever. But yeah, it -- I've seen Dr. Centola at different events like that.

THE VIDEOGRAPHER: May I interrupt for one sec?

Page 36

MR. DUFFY: Sure.

THE VIDEOGRAPHER: I think -- remember this morning when your thing was --

THE WITNESS: Yeah.

THE VIDEOGRAPHER: If you could fix it again. It's making that, like, ruffling of paper sound.

THE WITNESS: Okay. Is that any better?

MR. DUFFY: Why don't we do a little test. Why don't you go ahead and start. Just count to ten, Dr. Wininger.

THE WITNESS: One, two, three, four, five. Is that okay?

THE VIDEOGRAPHER: That sounds better to me.

THE WITNESS: Okay.

THE VIDEOGRAPHER: Cherree, are you okay?

THE REPORTER: Yeah, that's good.

THE VIDEOGRAPHER: Okay. Sorry for all the unnecessary commentary.

Q. BY MR. DUFFY: Is Dr. Centola a qualified lab director?

A. She has her HCLD. So yes, she is.

Q. One of the opinions that you hold in this case is that Tank 4 failed to perform as safely as an ordinary user would expect; is that correct?

A. Yes.

Page 37

Q. [redacted]

Q. Over how long a period of time?

MS. ZEMAN: Objection. This is beyond the scope of his expert testimony.

MR. DUFFY: I think it's part of it. It says "sudden." I'm asking for the time frame.

Q. You can answer.

MS. ZEMAN: Where -- again, no. Dr. Wininger is an embryologist. He is not an engineer put forth to opine on the mechanical failure of the tank.

MR. DUFFY: Well, he has an opinion that users do not expect sudden vacuum seal failure. It's at page 14 and 15 of his report. So I'm just asking him now what he meant by that.

Q. Dr. Wininger, when you came to the conclusion that a user does not expect a sudden vacuum seal failure, how long a period of time are you concluding that there was a sudden vacuum seal failure?

A. [redacted]

Q. And do you -- sorry.

Page 38

A. 2018.
Q. Do you know how many hours it took for the vacuum seal to be lost?
A. No, I do not.
Q. To prepare for your deposition today, what did you do?
A. I reviewed my report several times. I spoke with my counsel, Amy and Geoff. I looked at Dr. Jewell's report.
Q. Did you review the report of a Chart expert named Franklin Miller?
A. For preparation for the deposition?
Q. I guess at any time.
A. Yeah, I recall reading parts of -- parts of that.
Q. Your report was issued to us on November 6th of 2020.
A. Right.
Q. Approximately when did you review Dr. Franklin Miller's report?
A. I really can't remember. I reviewed so many different reports and exhibits. And I just -- I actually can't remember specific dates when I reviewed different aspects of the -- of the reports.
Q. When you reviewed Dr. Miller's report, did you

Page 39

review the portion about the testing that he conducted of an exemplar MVE 808?
A. I don't -- I don't remember reading that part.
MS. ZEMAN: If I could interject for a moment, I -- John, I think he may be confusing Mr. Miller's report with Mr. Cauthen's report.
THE WITNESS: That is correct. I did read -- I did read a Cauthen's report.
Q. BY MR. DUFFY: Okay. And that's the retired FBI agent; is that right?
A. That's correct.
Q. Did you review the report of Franklin Miller? He's a professor of engineering at the University of Wisconsin.
A. No, I don't think I did. I think I got those confused.
Q. You're not aware of any testing on an evaporation rate on an exemplar freezer that was conducted by Professor Miller?
A. No, I am not.
Q. You reviewed the deposition of Jean Popwell; is that right?
A. Yes, I did.
Q. And did you conclude approximately when she claims to have manually measured liquid nitrogen levels

Page 40

in Tank 4 on Saturday, March 3?
A. It seems that it was around 7:00 p.m.
Q. Okay. And then you read Dr. Conaghan's testimony about when he discovered the incident with the vacuum seal; is that right?
A. That's correct.
Q. And would it be fair to say that your memory is that Dr. Conaghan testified he discovered the incident about 12:30 p.m. on Sunday, March 4?
A. Yes. I do remember it was sometime around noon, that time frame.
Q. And as part of your opinions in this case you accepted as accurate the measurement of 14 inches of liquid nitrogen on Saturday, March 3 as measured by Jean Popwell. Is that a fair statement?
A. Yes.
Q. If it's proven that she did not measure liquid nitrogen at all on Saturday, March 3, 2018, would that alter your opinions?
A. No, it wouldn't.
Q. Why?
A. Well, she did a fill. She did a -- the one -- it was an auto fill. She pushed the button and filled the -- filled the tank and to cover up the canes, the boxes down below -- that were stored in the bottom of

Page 41

the tank. But I do not have any reason to believe that she did not measure the tank after she filled that evening.
Q. Is it your testimony that because Ms. Popwell initiated a fill cycle on Tank 4 on Saturday, March 3, if she failed to measure it manually with a dipstick it wouldn't affect your opinions? Do I understand that correctly?
A. That's correct.
Q. You did not review the data download for Tank 4's controller as part of your opinions; correct?
A. Would you repeat that question?
Q. Sure. You did not review the Tank 4 controller data download as part of your work in this case; correct?
A. That is correct.
Q. Technical break here for just one second, if we could. Dr. Wininger, the microphone is rubbing again up against your shirt.
A. Let me take -- let me just take this jacket off. Maybe it's rubbing on my jacket.
Q. Okay.
A. Is that any better?
Q. Yes.
MS. ZEMAN: Do you want to do a count for us

Page 42

maybe?
MR. DUFFY: Sorry, Amy?
MS. ZEMAN: Do you want to do a count for us just one more time?
MR. DUFFY: See how it works.
THE WITNESS: One, two, three, four, five.
MR. DUFFY: Sounds good.
THE VIDEOGRAPHER: Sounds good on my end.
MR. DUFFY: Okay. Good. Thank you.
MS. ZEMAN: I also notice I think sometimes you're moving around in the chair swinging a little. And it almost seemed like that was making it scratch as well. So maybe avoid that.
THE WITNESS: Okay. I'll sit still.
MS. ZEMAN: No fidgeting allowed in this.
MR. DUFFY: Like we're all back in grade school. All right. Okay. Let's go back, you guys. All right.
Q. How long would an end user like yourself or Ms. Popwell expect a fill cycle to take place on an MVE 808?
A. Well, I personally have never used a controller on a large tank like that. We use small tanks at our labs. But I would -- I would think it could take up to an hour to fill it depending on what the level was to begin with. And if other tanks were being filled at the

Page 43

same time and -- I would think that would affect the amount of nitrogen that would go through the piping to Tank 4. So -- but I personally do not have any experience with that sort of tank.
Q. Okay. That leads me to a couple of questions I should probably ask you, then, about the labs that you worked in. In your time as a lab director have you ever worked in a lab where you used a computer-controlled cryogenic storage tank?
A. No, I have -- I have not.
Q. Are the storage vessels that you use in all of your labs manual dewars with lids on them?
A. The majority are. There are a couple of the large steel tanks in Pittsburgh, but they do not use the auto controllers. They do not use a controller function. They do everything manually with that. And so they don't -- so we do not -- still do not have any experience using the computer-controlled fill function.
Q. And in the five labs that you currently direct, do you have a policy for manual measurements of the cryogenic storage vessels?
A. Yes. We have to -- College of American Pathologists says if you -- no matter if you have any types of alarms on your tank, you still have to do manual monitoring at least three times a week and record

Page 44

the value. So that's what we do.
Q. All five of your labs have a policy of manual measurement three times a week; is that right?
A. That's correct. And manual measurement three times a week and then of course visual, visual -- looking at the nitrogen levels as well as we're going in and out of the tanks which we do many times during the -- during the week. So we actually see the nitrogen there at the top of the tank. So these sorts of tanks fill -- are filled to the very top, and they are measured manually three times a week.
Q. Are the measurements recorded somewhere?
A. Yes. We do paper. We have paper charts that we record those on that we keep, you know, close to the tanks. And then we scan them -- scan all that into our -- into a computer so that we'll have -- you know, instead of keeping binders and binders and binders of these records, we can scan them into our computer.
Q. And for the five labs that you are currently directing, were you doing manual measurements three days a week before the incident at PFC?
A. Well, one of the -- one of the labs is not an IVF lab. One of them is a drug testing lab. So there are four labs that we have tanks. One of them only has frozen sperm -- the lab in Hermitage.

Page 45

But yeah, the -- there was a new directive from CAP saying to do more manual measurements. We had always done manual measurements in my home lab in Atlantic Fertility. So but now CAP says you have to do manual measurements in addition to having any types of remote monitoring.
Q. Right. And I guess my question was just to that time period before the incident at PFC in March of 2018, in the four labs that you are the director where you use cryogenic storage vessels did you have a policy of manual measurement?
A. Yes. We have always done manual measurements at all of our facilities when -- just to have that information showing if the tanks are low, getting low. It will show more usage whether they're drop -- the levels are dropping more than they should. But we do have the alarms on them.
But the number of manual measurements has increased after all -- you know, all the incidents that have occurred in the last, you know, three or four years.
Q. So before the PFC and the University Hospitals incidents in March of 2018, how often per week were you having your personnel manually measure liquid nitrogen levels in the cryogenic storage vessels?

Page 46

A. We were doing it one time a week.
Q. And was that once every seven days?
A. During -- yeah, during the workweek, yes. Yeah, it would be -- it would be -- so it would be every seven days because we work seven days a week.
Q. Prior to the incident at Pacific Fertility in March of 2018, were all of the cryogenic storage vessels in the labs that you directed connected to an alarm system?
A. Yes.
Q. Why did you do that prior to the PFC incident?
A. Well, the PFC incident really didn't have anything to do with how we were doing remote monitoring. We've done -- we have -- I've done remote monitoring for at least 20 years that having monitor -- you know, having probes in the -- in the tanks hooked to something like a Sensaphone. So we have an auto dialer, or we have different types of alarms just manual -- you know, little alarms sticking down in the -- in the tanks that made a really, really loud noise that would trip the Sensaphone.
So because you can have a Sensaphone that can pick up changes in am -- you know, the ambient noise. So even things like that will set off the Sensaphone. Set it off. So back in, you know, when I first started,

Page 47

we would use things like that. And the alarms have gotten better and better over the years.
Q. So when -- what was the year that you started being a lab director? I know it's in your CV, but I don't have it before me.
A. 1990.
Q. 1990. Okay. So when you started as a lab director in 1990, were all the cryogenic storage vessels in your labs connected to a Sensaphone or other remote alarm device?
A. Yes. Those were just by sound though. There weren't wires or anything like that that went to the Sensaphone. It was -- that was the ones that had -- just made a loud noise that -- so any loud noise that occurred in the lab from anything, it could be any of the -- we only had one tank at that time because cryopreservation was fairly -- you know, fairly new in 1990. So the more we did, the more monitoring we would have to do because of -- you'd move -- I moved to larger and larger facilities, then you'd have more tanks and then you'd need more monitoring.
Q. The -- I'll strike that.
Approximately when did the technology advance such that you could put a probe in a cryogenic storage tank and connect it to a Sensaphone or other remote

Page 48

alarm device?
A. I think that was, like, around 19 -- between 1995 and 2000. I don't know for sure, but it was somewhere in that time frame.
Q. Okay. And when the technology developed at that point where probes could be put in a cryogenic storage tank and then directly connect it to a Sensaphone or remote alarming device, did you move to that technology for all of your labs?
A. Well, I didn't have a whole lot of labs at that time. So -- but as I did -- started doing more on-site directing, most of them already had remote alarms already set up. So I was involved in helping to purchase some new alarms and helping start set up probes on new tanks as new tanks were purchased and things like that. But the Pittsburgh labs and the Austin lab, they already had alarms and Sensaphone measurement when I started with them.
Q. When you were the lab director at Abington Memorial from '93 to 1998, were the cryogenic storage vessels there connected directly to a Sensaphone or other remote alarm device?
A. No, they weren't.
Q. When you moved to become the director of laboratories at the Reproductive Biology Associates in

Page 49

Atlanta, Georgia, from 1998 to 2003, were the cryogenic storage vessels there directly connected to a Sensaphone device?
A. When I first took over they were not. But they weren't -- they did not have CAP accreditation when I took over. So as I was there, I got -- I did get them CAP accredited, and we did start doing -- we did not have the remote alarms. We did add the -- just the sound alarms that I was telling you about and had those hooked up.
Q. At the Premier Fertility Center in High Point, North Carolina, where you served as the lab director from 2007 to 2016, did they have remote alarms monitoring the cryogenic vessels?
A. We did not have -- we did not have probes in those tanks either. We had -- I think we had one tank that we kept embryos in.
Q. How many tanks did you have at Premier facility Center -- Fertility Center? Excuse me.
A. Yeah. We had one tank for sperm that was kept in the andrology lab, and we had one tank for embryos and oocytes that was kept in the embryology lab. And, again, I had that hooked up to another one of the sound-type alarms because I did have Sensaphones in the lab that I had my incubators hooked to. And any sound

Page 50

-- again, any sound that came from that tank or anything, really, in the lab would set off the -- set off an alarm and I'd get a call. And other people in the lab would get a call, too, but I was always first.

Q. At some point in the nine years where you -- where you were the director of laboratories at Premier Fertility, did you move to a probe device that was directly connected to a Sensaphone or other remote alarm device?

A. No, I did not.

Q. You always had the system where the Sensaphone would listen for an audible alarm coming from a freezer and then send the page or call?

A. Right. Yes.

Q. And what type of alarms were used in the Premier Fertility Center for the dewars that you had?

A. That's what I was talking about.

Q. Okay. Maybe I just didn't understand.

A. Yeah. It was -- it was the sound-type alarm. It made the loud noise that changed the total, like, normal ambient sound level in a lab which was normally very quiet. And if it goes -- if that thing went off like a siren, it would set off the Sensaphone and I would get a call.

Q. So at Premier Fertility Center the two tanks

Page 51

that you had there had probes inside with audible alarms. Fair?

A. Right.

Q. And then what conditions would set off an audible alarm from the cryogenic storage vessels at Premier Fertility?

A. Sound.

Q. Oh, I'm sorry. What condition inside the cryogenic storage vessel would cause an alarm?

A. If the nitrogen fell to a level below the probe.

Q. And where was the probe set at?

A. It was down -- it was in the nitrogen down about 4 inches into the nitrogen level.

Q. So if the liquid nitrogen level fell below that 4-inch level, it would cause an audible alarm from the probe?

A. Correct.

Q. And that audible alarm would then be picked up by the Sensaphone and would call and text you; is that right?

A. Right. Right. It never -- it never happened the ten years that I was there, but we did have it set up.

Q. And when you were in Atlanta for the period

Page 52

1998 to 2003, did you have probes in the cryogenic storage vessels in that lab that had alarming capability?

A. Yes. That's -- we talked about that a few minutes ago. Yeah, we had the same sort of setup with -- after I got them CAP accredited, we started having the alarm stuck down in the neck of the -- of those -- of the dewars to make the sound similar to what I was talking about at Premier Fertility.

Q. Okay. In 2015 you moved to Atlantic Reproductive Medicine as a lab director; is that right?

A. Yes.

Q. And were the dewars that you used in that lab equipped with probes as well?

A. At that time they were not. But within six months of being there, they had -- they had a Sensaphone on the wall in the embryology lab. But I add a new Sensaphone and a new -- probes in all the tanks and a unit called a Cryo-Save on the wall. So that monitored all of our tanks. So we had six tanks there. So I set that up as soon as I took over. And that's what we currently have there and same thing we have in Pittsburgh.

Q. Are the probes in Atlantic Reproductive Medicine's lab from approximately 2013 to 2017, were

Page 53

they directly connected to the Sensaphone or did they just have the audible alarm feature that would be heard by the Sensaphone?

A. At that time they had the audible. Just the audible. But when I took over, I added the probes that were actually monitored and hooked to the Cryo-Save unit and the Sensaphone. So it was a different -- you know, different type of monitoring.

Q. Let me make sure I understand how you made the changes there. So when you were at Atlantic Reproductive Medicine, when you arrived they had a Sensaphone but no probes in the dewars?

A. They had -- when I got there they had about three tanks. And they had -- they had -- they had audible alarms in those tanks. But -- and they did have the Sensaphone on the wall.

Q. Okay.

A. But when I got there I was -- I just said I think we need to -- we're getting more tanks with the increase of vitrification that we're doing, genetic testing, oocyte cryopreservation, vitrification, I wanted to update the alarm system. So we did order the probes, the Cryo-Save unit, and hooked that all to the Sensaphone.

Q. Okay. And then when you bought the probes for

Page 54

Atlantic Reproductive Medicine in that period between 2015 and 2017, were they connected by a wire to the Sensaphone?

A. Yes. They were -- they were hooked to a wire to a unit called a Cryo-Save which is sort of a -- it's just another box that's hooked -- it's on the wall that you hook all those probes to so -- because you can't hook all those probes up to the Sensaphone. You would hook one wire to the Sensaphone.

So the Cryo-Save is sort of a -- sort of a middleman in the chain for the Sensaphone. So you hook all these cables up to the Cryo-Save, and then you have a -- one wire that goes from the Cryo-Save to the Sensaphone. So any alarm for any of those tanks that occurs, that would go to the Cryo-Save. That would -- the Cryo-Save would have an audible alarm trip up going from open to a closed position on a transistor in there, and then that would go to the Sensaphone and automatically start dialing.

So if you can't -- the probe -- the probe wires are very large. I mean, they look like big -- the old phone cords all coiled and things like that. So you can't hook something like that to a Sensaphone.

Q. Okay. Let me just ask you. When you became the lab director at Carolina Specialty Care, did they

Page 55

have probes connected to a Sensaphone?

A. Again, they do not do -- they are a drug testing laboratory.

Q. All right. Thank you. I'm sorry. When you joined the Magee Women's Hospital and the University of Pittsburgh Physician labs in November of 2017, did they have probes that were directly connected to the Cryo-Save and then to the Sensaphone?

A. Yes.

Q. And at Westlake in Austin, Texas, when you took over as lab director in February of 2018, were the cryogenic storage vessels connected to a Cryo-Save and then connected to the Sensaphone?

A. Yes.

Q. Okay. I want to take you back now to the opinion that you have in your report about users not expecting to lose 14 inches of LN2 in less than 24 hours. Is that an opinion that you hold?

A. Yes.

Q. And that would be based on the 14-inch measurement that Jean Popwell made on Saturday, March 3; correct?

A. Yes.

Q. It would also be based on the fact that you believe she filled Tank 4 with liquid nitrogen on

Page 56

Saturday, March 3; correct?

A. Yes.

Q. And you have no personal experience with an MVE 808 cryogenic storage tank with a controller; correct?

A. That's correct.

Q. So would it be fair to say you don't have any personal knowledge of how long it takes to fill an MVE 808 using a TEC 3000 controller?

A. That's correct.

Q. And would it also be true that you don't personally know what would be considered an excessively long fill time for an MVE 808 using a TEC 3000 controller?

A. That's correct.

Q. And you have no personal experience with an MVE 808 with a TEC 3000 controller running out of liquid nitrogen; correct?

A. That's correct.

Q. In the labs that you've directed over the years -- well, strike that.

As part of your work in this case did you review a video of an inspection of the Pacific Fertility lab?

A. No, I did not.

Q. Through some of the deposition testimony have

Page 57

you come to learn how it was that they connected supply tanks to the Tank 4 at issue in this case?

A. Yes.

Q. And there were supply tanks in one room; is that right?

A. Yes. Supply tanks were in the room adjacent to where the tank -- where the actual embryos are stored in the tanks.

Q. They were connected to Tank 4 by a plumbing system that went up into the ceiling and over into the IVF lab?

A. I do not -- I do not know how the pipes ran.

Q. Okay.

A. I just -- I do know that they were hooked to the liquid nitrogen source.

Q. And that was through piping between the two rooms; correct?

A. Yes.

Q. In any of the labs that you've ever directed, have you had that system?

A. No.

Q. In your labs the only way you would go about filling liquid nitrogen is doing it manually; is that correct?

A. Yes.

Page 58

Q. Please describe that process.
A. We have a tank room where we have our gases for the incubators and we have the liquid nitrogen dewars there. And there's a large steel hose hooked to the large nitrogen dewar. The hose goes through a wall into a -- an area where we would be -- we would roll the tanks to that. It's a couple -- a couple rooms down. These small tanks have rollers on them. We can roll them over there and fill them --
Q. Let me clarify one thing before you finish your answer. When you say move the tanks, sometimes we refer to the supply tanks as tanks and then dewars as being a different thing. So when you say you're rolling something over to this area where the fill pipe is, is that the cryogenic dewar?
A. The dewars, correct. The dewar -- the small dewars are all on rollers, and we can roll the dewar over to the area where the pipe -- where the hose comes through the wall. And we fill the tanks manually at that point. So we fill all the tanks. And we also have two empty tanks that we keep filled.
And so we'd fill everything, and I'd roll them back over and hook them back up to the alarm system.
Q. Prior to the incident at PFC in March of 2018, when would you do the manual measurements on a weekly

Page 59

basis?
A. We would do them in the morning with -- when we did the rest of our QC.
Q. And how often would you fill the cryogenic dewars on a weekly basis?
A. We'd fill them one time.
Q. And is that -- would you manually measure the level of liquid nitrogen before you added more liquid nitrogen?
A. No, we would not.
Q. Would you fill the dewar with liquid nitrogen and then manually measure them?
A. No.
Q. Would manual measurements be done at a time different than the filling?
A. Yeah, again, we would take the measurement in the mornings when we did the rest of our QC, QA measurements on everything. And most of the time the tank filling would be in the -- would be, you know, after lunch sometime.
Q. I see. But just to make sure I understand the frequency of measurement in your labs, you would manually measure only once a week; is that right?
A. Prior to the new CAP guidelines.
Q. Right. And would you measure manually the

Page 60

liquid nitrogen levels in the dewars on the same days that you would fill them?
A. Not -- it wouldn't have to be. It could be we would just measure them. If we did one -- you know, three or four years ago if we did once a week, we would measure them in the morning and then sometimes it may be the same day that we measured them. Sometimes it wouldn't be. It just --
Q. And --
A. It just -- it didn't -- it didn't really matter. We just wanted to get the measurement. Now we measure them Monday, Wednesday, and Friday. And then we fill them usually midweek.
Q. Okay. But back to the time before the incident in this case in March of 2018, it would be normal for your lab to fill on one day and probably not measure until several days later? Is that a fair statement?
A. It could have been a couple days earlier, a couple days later. There wasn't really -- they -- the measurement was more than likely the middle of the week. It was probably on Wednesday. And I think most of the time they did filling on Fridays.
Q. Okay. And then by taking those measurements, what would you do with the liquid nitrogen measurement data prior to March of 2018?

Page 61

A. We would basically do the same thing we're doing now. We would fill them, put it on the piece of paper that we have. We actually have it near -- there's a refrigerator near our tanks that we have those forms on there that we go through, fill them out.
At that time we were not scanning them. So we do have notebooks full of that -- full of that data. But when we did upgrade our computer system and our drives, we can scan them now so we did not have to keep the paper copies. But we've always recorded them on paper copies.
Q. And then would you ever use that LN2 measurement data to calculate LN2 consumption of each individual dewar?
A. We really did not because we would fill them -- fill them to the top which is -- you know, these dewars are way different than the stainless steel ones. They're much smaller. And you fill them all the way to the -- really to the Styrofoam plug. So -- and the probe goes down through the Styrofoam plug into the liquid nitrogen. So we would know if there was an issue with a tank starting to go bad. We've never had one that has gone bad by the different characteristics of a tank. So we do not -- we have not calculated the usage.
Q. Do you use MVE dewars in your labs?

Page 62

A. Yes, we do.
Q. Do you use any other company's dewars in your labs?
A. I don't think so. I think that they are -- the small tanks are all MVE.
Q. When you're filling the dewars in your labs, you're filling them all the way up to the top of the neck where the lid is, is that a fair statement?
A. Well, you got -- you have about a 8-inch Styrofoam --
Q. Right.
A. -- piece underneath the lid. It would be filled up to that -- to the Styrofoam.
Q. And then how much distance would there be between the top of the samples in your MVE dewars and the top level of liquid nitrogen when you fill it?
A. Well, I don't know if you're just talking about the canes themselves. The samples are down in the very, very bottom of the cane. And the oocyte or embryo is at the very, very bottom of the devices. We put the -- into the -- into the bottom goblet on that cane. So the top of the cane is covered with, I'd say, 6 inches -- 6 to 8 inches of liquid nitrogen. So that's at the very top of the cane. So all of the biological materials are at the very, very bottom of the dewar. Because that's

Page 63

how we load them.
Q. And so the samples in the dewars, the MVE dewars that you have, are located even further from the top of the cane; is that right?
A. Yes. Yeah. They're probably, again, maybe 6, 7, 8 inches from the top of the cane to the top of the liquid nitrogen level.
Q. So there might be -- sorry. Go ahead.
A. Oh, yeah, there's, like, six metal canisters in there. You could put -- you can put about, you know, 15, 20 canes in a canister. And then you would -- you'd know which canister you need to go into. So you would pull those up. And, again, the canes have two plastic goblets on them, and the bottom goblet has the embryos on them or eggs.
Q. Would you estimate, then, the distance between the actual samples in your MVE dewars and the top of the liquid nitrogen level after you fill? Is that about 14 inches or so?
A. Yeah, 14 to 16 inches. You know, they're the very bottom -- very bottom of the tank.
Q. As part of your answers to one of my questions I thought I heard you say that you've never had a cryogenic dewar lose vacuum seal; is that right?
A. That's correct.

Page 64

Q. And let me be just a little more precise. I know you're an off-site lab director. Have any of the labs that you've ever directed experienced a vacuum seal failure in a cryogenic dewar?
A. They have not as I -- when I have been their lab director, there has not been any events where there was a tank failure. And there was not -- there was no conversation about a prior tank failure as we were talking about tanks. So I would have -- I would have thought, you know, if it would have happened, say, five years earlier before I took over, they would -- you know, they would have said something about it. But I've never heard any tank failures at any of the labs I've been associated with.
Q. And how long do you keep MVE dewars before you replace them with new equipment?
A. We have not replaced any at Atlantic Fertility. I mean, those aren't -- I think they started business around 2013. So probably their oldest tanks are seven years old. I'd say the Pennsylvania lab probably has some older tanks than -- much older tanks than that. They have been in operation longer than that.
But until a tank shows that it's losing vacuum, there is really no reason to replace them. We have them monitored. They're not showing signs of cooling, cool

Page 65

to the touch or frost on the tanks or anything like that that we look for. So as long as we do not see things like that, we do not replace them.
Q. In your work as a lab director, have you employed a policy of transferring samples every five years to a backup tank and then drying out one of your dewars?
A. No. We do not do that.
Q. Prior to the incident in March of 2018 were you aware of the signs and symptoms of a cryogenic dewar that's losing vacuum seal?
A. Yes, I was.
Q. And what was your knowledge about the signs and symptoms of a vacuum seal loss prior to March of 2018?
A. Well, as I mentioned a minute ago, the tank would get cool to the touch as the vacuum starts -- or the tank starts losing the vacuum in between the two walls that keep -- kind of serves as an insulation for the tank. And if that vacuum starts breaking down, you start feeling the cold on the tank because you start feeling some of the -- you know, some of the cold of the liquid nitrogen.
And as it gets worse you start seeing frost, frost appear on the bottom of the tank. And those are the -- and the increased use of liquid nitrogen if

Page 66

you're -- if you're filling them up. And it's like if we roll them somewhere and we fill them up and we see that it's much lower, then we would -- that would be another sign.

But we've -- in our -- again, some of our meetings that we have, you know, over -- you know, over the last 15, 20 years, those are -- you know, people have given presentations on things like that.

Q. And that was one of the questions I was going to ask is how you came to learn about the signs and symptoms of vacuum seal loss in a cryogenic dewar. Could you explain how you did come to understand that?

A. Yes. It was -- it was through scientific meetings, online meetings that people talk about these types of issues. There have been presentations, poster presentations at these meetings that we go to annually or -- again, go to the AAB meeting that I was talking about. There seemed to be always nice presentations on signs and symptoms of a dewar going bad.

Q. And who gave those presentations? Was it the lab director, or was it someone else?

A. I can't recollect who. There have been multiple, multiple presentations. And there are always poster presentations at these -- at these meetings as well. And sometimes there's nobody at the poster to

Page 67

talk to about it. You just kind of go by and read it. So it's -- I can't remember who gave the presentations.

Q. In any of the presentations that you've either read or attended, did any of the speakers talk about vacuum seal loss not producing ice, condensation, or water?

A. No. I do not remember anyone presenting anything saying that it would just happen without signs and symptoms. And they would always say it was good to have a spare tank in case something like that did -- you know, if you did have a ring of frost around the bottom of your tank and it's cold to the touch, that was sign that the vacuum loss was going to be occurring and it would be a time to start moving samples to another tank.

MR. DUFFY: We've been going for about an hour. Dr. Wininger, would you like to take a short break?

MS. ZEMAN: We can go off the record and talk about that?

MR. DUFFY: Yep.

THE VIDEOGRAPHER: We are now going off the record. The time is 10:13 a.m. Pacific Standard Time.

(Whereupon lunch recess was taken from 10:13 to 10:49.)

THE VIDEOGRAPHER: We are now going back on the record, and the time is 10:49 a.m. Pacific Standard

Page 68

Time.

Q. BY MR. DUFFY: Dr. Wininger, it's an opinion that you hold in this case that a rapid vacuum seal failure is dangerous to the samples; correct?

A. Correct.

Q. Would you please explain to me why you think that.

A. Well, a rapid vacuum loss, whether -- in any type of tank causes a -- you know, a rapid decrease in the liquid nitrogen levels. And the majority of the samples, oocytes and embryos, are vitrified, and they really need to stay cooler than minus 150. And if they -- if they get into the range of warmer than 150 and up to minus 132, you start having really significant ice crystal formation which is a major -- really detrimental to eggs and embryos. So -- and which will lead to major tissue damage, decreased thaw rate, viability rate, and pregnancy rates, and delivery rates.

Q. In terms of a rapid vacuum seal loss, it's your estimate that -- well, strike that.

Your definition of "rapid," when you say a rapid vacuum seal loss is less than 24 hours; correct?

A. Well, to me rapid just means something that occurs without any indication that there's a tank vacuum problem. In -- you know, in the large tanks, small

Page 69

tanks, any tanks, if you're seeing no signs that we spoke of earlier and you have vacuum loss and loss of liquid nitrogen, I think whether it occurs in, you know, 5 hours, you know, or, you know, 24 hours, it's just something that can occur after the last time that you filled it and you come back and it's empty. I don't know how -- what the time frame was, but definitely it would be less than 24 hours for sure.

Q. Could it be as fast as 5 hours?

A. I do not know. I don't -- do not really know how fast it can occur.

Q. Is it more important from a standpoint of a lab director to be focusing on the exterior signs and symptoms of vacuum seal loss so that you can do something to address it?

A. Well, it's all the staff, all the embryology staff have -- is trained in knowing when there's a potential tank failure that's imminent. So, I mean, I would -- I would definitely be sort of in charge of saying, "Okay. We got to move it all -- everything from this tank to this tank." But everyone knows the signs and symptoms of a -- of a -- of a dewar that's going bad because it's, you know, all of them have vacuum and all of them you would expect to see those signs.

Q. In your undergraduate studies did you take any

Page 70

physics classes?
A. I took one physics class.
Q. In your time as a lab director have you ever seen an LN2 supply tank lose vacuum seal?
A. Are you talking -- you're talking about dewar?
Q. No. The LN2 supply cylinders with the gauges on top.
A. No. No, I have never seen one of those lose pressure.
Q. Is it your memory in reviewing the depositions of the PFC lab personnel that none of them saw the signs and symptoms of vacuum seal loss?
A. That's correct. I do not see any -- anyone that saw a symptom of vacuum seal loss.
Q. And if you had seen vacuum seal loss before 12:30 on March 4, you would have expected to see ice, water, and condensation; correct?
MS. ZEMAN: Could you read back the question.
(Whereupon the record was read as requested.)
MS. ZEMAN: Objection. Vague and ambiguous.
Q. BY MR. DUFFY: You can answer.
A. I don't -- I don't know if you would have seen all of those symptoms when the vacuum is already totally lost. I mean, the signs that we have been discussing have to do with an imminent vacuum seal loss, not one

Page 71

that has already totally occurred. Vacuum can start decreasing. And when that occurs, you do have those symptoms.
But when you have the total vacuum seal loss, generally really you would just -- you would see condensation, you know, around the tank, but you would not see -- since the purpose of the vacuum is to keep the cold in and the warm out. If the vacuum's already gone, there's not any cold in there. Or if there is, there is very, very little. So you really wouldn't see a big frost ring on a tank that you've already had a hundred percent vacuum loss.
Q. Your expectation at least; correct?
A. Correct. And that's -- I mean, those are -- I mean, these are things that, again, we have in these meetings that I've gone to and posters I've read over the last, you know, 20-some years at these meetings about tanks. These are things that they have -- they have talked about.
Q. Sure. Is that you actually would see those signs and symptoms of vacuum seal loss on the exterior of the -- of the tank; correct?
A. You see them when there's an imminent threat of a vacuum seal loss that -- when you see those things, you know that something -- that it's probably going to

Page 72

be happening. So at that time they have told us to go ahead and transfer the samples when you see that, that you're -- there is going to be an event. The vacuum is still there, but it's losing vacuum. So when you have the signs and symptoms, there's something you can do it about it at least.
Q. Go ahead.
A. Yeah, just say those -- but, I mean, those are the things -- I mean, we haven't had it, but these are all things that I've attended a lot of lectures on.
Q. And in the lectures and presentations that you've attended, have they always had liquid nitrogen inside the dewar?
A. There have been -- there have been some that have been inside the dewar, and they have had some incident reports of people that have had vacuum loss and that they showed that the tanks have gone bad and that they transferred everything to the new tank. So they -- these were, you know, slides and videos and things like that that show what they did when they thought that there was going to be an imminent loss of vacuum.
Q. Did you review any of those presentations prior to writing your report?
A. No, I did not.
Q. Are you relying on any of those presentations

Page 73

or studies for your opinions in this case?
A. No.
Q. One of the things I think I just wanted to make sure I understood in terms of your understanding of vacuum seal loss, in all the presentation studies that you have read generally, did they all talk about water, ice, and condensation on the exterior of the freezer as being a sign or symptom of vacuum seal loss?
A. They say it's a sign or symptom of vacuum. But vacuum is still present, but it -- there is an imminent threat of the vacuum totally not being there for -- you know, we don't know how long it's going to be there. So they just -- you know, we've always been told when you see those types of symptoms that the tank is still full of liquid nitrogen, but it's cold -- cool to the touch, you have an ice ring around it, they say something is probably going to happen soon. You know, we don't know how soon. But they say this is the time where you need to be proactive and go ahead and move your samples to another tank before you do have a vacuum -- total vacuum loss.
Q. But in each of those studies the thing that's causing the ice, the water, and the condensation is the liquid nitrogen that's inside the dewar. Is that a fair statement?

Page 74

A. Right. Right. As you have vacuum loss, you do start having those symptoms. You do have a ring. But again, these dewars are -- from what have been reported have been pretty well full of liquid nitrogen. But as you have vacuum loss, you do start feeling some of the cold on the -- on the outside of the tank.

Q. Because it's escaping from inside the dewar to the outside?

A. Correct.

Q. And the laws of physics would say what we'll see then is the development of ice and water; correct?

A. Yeah. If -- as long as there's still a substantial amount of liquid nitrogen in the tank, you will have ice on the outside of the tank.

Q. What if the inside of the dewar was empty of liquid nitrogen, would you expect to see ice, water, and condensation on the exterior of the dewar?

MS. ZEMAN: Objection. I think we're getting beyond the scope of his expert testimony.

Q. BY MR. DUFFY: You can answer.

A. From what I remember, if it's totally -- if the vacuum seal -- the vacuum is totally gone, you do not have all of those symptoms anymore because a lot of the nitrogen will be gone, if not all. It won't be cool to the touch because the nitrogen may be at extremely low

Page 75

or zero level. And any condensation that could have been on there has turned to water. And most people just say there's going to be water and under -- you know, around the tank. That's what I've always heard.

Q. Well, if they're full of liquid nitrogen inside the dewar, you wouldn't expect to see ice, water, and condensation on the outside. Fair?

A. If there's no nitrogen -- yeah, I wouldn't -- if there's no nitrogen in the tank, I would -- I would just -- I would expect to see a liquid under the -- you know, around the tank because as liquid nitrogen is being depleted, then now the vacuum is gone, I think at some point you would have probably had some sort of condensation or -- on the outside of the tank as nitrogen was leaving the tank and which would just basically sweat off the tank and the floor.

Q. But you would agree with me without a cooling source inside the dewar with vacuum seal loss you're not going to get the sweating on the outside, ice balls, and water. Fair?

A. You wouldn't get the ice crystallization on the outside of the tank.

Q. Because you have liquid source; right?

A. Right. You don't have a liquid nitrogen source if the tank is empty. But you would have -- as I said,

Page 76

as the nitrogen is being depleted, you probably have something going on on the outside of the tank as this is occurring the same as when we take nitrogen from our dewar -- our liquid nitrogen tanks to fill our dewars. When that occurs, they're -- we get condensation on the outside of the liquid nitrogen source.

So I just -- I just think it -- this is all from things that I've, you know, read and the -- and the presentations that I've gone to over the years. This is basically what they're saying. You just have to pay attention to your tanks and know when there's going to be a threat so you can do something about it in terms of the ice ring and cool to the touch.

Q. You hold an opinion in the case that the eggs and embryos that were in the tank before the March 2018 incident -- well, strike that. Let me break that up.

You reviewed the depositions in Tank 4 controller data for 2013 and 2014; is that right?

A. Yes.

Q. And you reviewed the success rates calculated by Dr. Jewell for December 2013 and January 2014?

A. Yes.

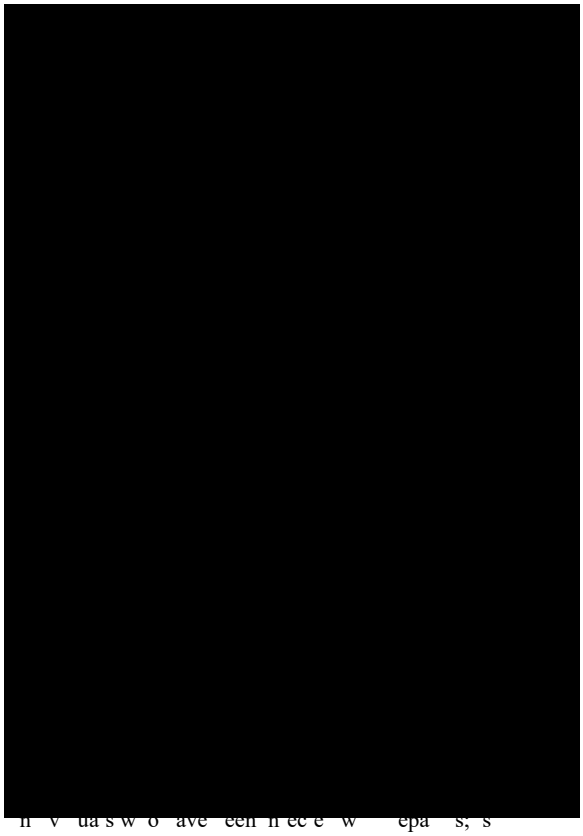
Q. And you concluded that there was no evidence of damage to the samples that were in Tank 4 in December of 2013 and January of 2014. Is that a fair statement?

Page 77

A. Yes.

[redacted]

Page 78



Page 79

[redacted]
[redacted].
Q. What are other diseases that require storage of biological tissue in LN2 vapor?
A. Well, if there were any -- anything like HIV-infected samples, samples that are very -- samples like you said, hepatitis, HIV. Those are the main ones. I -- you know, we have -- we have a few of those that we keep in a dry shipper -- and that's something else that we would ship off site. Anybody with a -- with a -- something like that, we would -- you know, we would ship that to ReproTech as well because they can store it.
Q. They can store it. All right. But it is an accepted form of cryogenic storage to store human tissue in LN2 vapor; correct?
A. It is. It is acceptable, but I do not know the type of tank they would use and the size of the tank they would use to do something like that.
Q. When samples are stored in LN2 vapor you can achieve a temperature that allows the tissue to remain cryogenically preserved. Is that a fair statement?
A. Yes.
Q. And in looking at the controller data for Tank 4, it maintained a temperature log for that period December 2013 and January 2014; is that right?

Page 80

A. Yes.
Q. And it consistently showed a temperature of about negative 196 Celsius; correct?
A. Correct.
Q. Do you have a quality control manual for the labs where you act as lab director?
A. Yes.
Q. Do you have a QC policy concerning connecting cryogenic storage vessels to an alarm device?
A. Yes.
Q. And was that policy in place before the incident at PFC in March of 2018?
A. Yes.
Q. And does your QC manual require that all your cryogenic storage vessels be connected to an alarm's device like a Sensaphone?
A. Yes.
Q. And was that the same policy that was in place before the incident at PFC in March of 2018?
A. Yes.
Q. With the alarm devices that you put in your cryogenic storage vessels, if liquid nitrogen level fell below that 4-inch safety zone that you have, it would cause an alarm to sound; correct?
A. Correct.

Page 81

Q. And that's an audible alarm at the cryo storage device; correct?
A. Yes. It's a audible alarm at the Cryo-Save unit.
Q. And then how long before that translates into a call from the Sensaphone?
A. At one minute.
Q. Have you ever ignored a call from the Sensaphone in any of your labs?
A. No.
MR. DUFFY: I don't have any other questions. Thank you very much for your time.
MS. ZEMAN: I may have a few redirect questions. If we could maybe take a five- to ten-minute break so I can just look over my notes.
MR. DUFFY: Yeah.
MS. ZEMAN: Okay. Thanks.
THE VIDEOGRAPHER: We are going off the record at 11:14 a.m.
(Whereupon a break was taken from 11:14 to 11:26.)
THE VIDEOGRAPHER: We are now going back on the record. And the time is 11:26 a.m. Pacific Standard Time.
//

Page 82

EXAMINATION BY MS. ZEMAN

Q. Dr. Wininger, there's just one matter I wanted to revisit. And that was earlier in your testimony I believe Mr. Duffy asked you if you had reviewed the Tank 4 controller data. And my recollection is that you thought you had not reviewed that. Does that sound familiar?

A. Yeah, that's familiar.

Q. Okay. If you could look at page 29 of your report. And once you get there about at a third of the way down there's a reference to CHART070093 and then a parentheses reference to a maximum event log. Do you recollect what that document is?

A. Yes. It's the controller, the controller data for Tank 4.

Q. So does that refresh your recollection if you reviewed that material?

A. Yes, I did -- I did look at it. I reviewed it. It was a ton of -- ton of information. I certainly didn't memorize anything. But I looked over it and just tried to familiar myself -- familiarize myself with some of that. But now that I remember exactly what that was, I did -- I did spend some time looking over that.

Q. And you reviewed that partially in relation to the 2013 and 2014 alleged prior warming events; correct?

Page 83

A. Yes, that's correct.

MS. ZEMAN: No further questions.

MR. DUFFY: Okay. I think we're all done; right?

THE VIDEOGRAPHER: This marks the end of the remote deposition. We are going off the record at 11:28 a.m. Pacific Standard Time. Thank you, Counsel.

(Whereupon the proceedings were concluded at 11:28 a.m.)

---oOo---

//

//

I have read the foregoing deposition transcript and by signing hereafter, approve same.

Dated_____.

_____
(Signature of Deponent)

Page 84

DEPOSITION OFFICER'S CERTIFICATE
(Civ. Proc. § 2025.520(e))

STATE OF CALIFORNIA)
) ss
COUNTY OF CONTRA COSTA)

I, CHERREE P. PETERSON, hereby certify: I am a duly qualified Certified Shorthand Reporter, in the State of California, holder of Certificate Number CSR 11108 issued by the Court Reporters Board of California and which is in full force and effect. (Fed. R. Civ. P. 28(a)).

I am authorized to administer oaths or affirmations pursuant to California Code of Civil Procedure, Section 2093(b) and prior to being examined, the witness was first duly sworn by me. (Fed. R. Civ. P. 28(a), 30(f)(1)).

I am not a relative or employee of any attorney or counsel of any of the parties, nor am I a relative or employee of such attorney or counsel, nor am I financially interested in this action. (Fed. R. Civ. P. 28).

I am the deposition officer that stenographically recorded the testimony in the foregoing deposition and the foregoing transcript is a true record of the testimony given by the witness. (Fed. R. Civ. P.

Page 85

30(f)(1)).

Before completion of the deposition, review of the transcript (xx) was ( ) was not requested. If requested, any changes made by the deponent (and provided to the reporter) during the period allowed, are appended hereto. (Fed. R. Civ. P. 30(e)).

Dated: December 1, 2020

D

E

F

G

M

Q

R

S

T